

Strategic Plan for Eradication of Asian Longhorned Beetle from New York and Illinois

A collaborative project of:

USDA-APHIS-PPQ

New York Department of Agriculture and Markets

Illinois Department of Agriculture

City of New York Department of Parks and Recreation

City of Chicago Department of Streets and Sanitation



Eradication of Asian Longhorned Beetle in Illinois and New York Implementation of the Strategic Plan

EXECUTIVE SUMMARY

The Asian Longhorned Beetle (ALB), *Anoplophora glabripennis*, a destructive wood-boring pest of maple and other hardwoods, was first discovered in the United States in Brooklyn, New York in August 1996, and was detected in Chicago, Illinois in July, 1998. The potential for economic, social, and environmental effects if this wood boring pest was to become widespread in the United States is extensive. Several industries would feel the impact including the timber industry, maple syrup industry, commercial fruit industry, tree nursery and greenhouse industry and the tourist industry. Since 1996, APHIS, State and city cooperators in New York and Illinois, and US Forest Service have undertaken eradication activities imposing quarantines, conducting surveys around confirmed sites, and removing infested trees. To date, over 5,000 trees have been removed in New York and 1,400 trees in Chicago.

Despite these efforts, the pest continues to spread in these metropolitan areas. Lack of effective survey and control technology other than tree removal has limited progress. However, better survey techniques and a chemical treatment are now available. This document proposes an aggressive joint Federal, State and local initiative to eliminate the pest from the United States and protect vulnerable urban, forest, and agricultural resources at risk.

The primary objective is to protect the forest products industry, the biological diversity of our hardwood forests and park lands, and the quality of the urban environment from the destructive effects of the ALB through its containment and eradication. Implementation of the initiative will follow emergency response guidelines (recently developed by technical experts) that specify the protocols for survey, control, and regulatory activities for areas infested with the ALB. The guidelines will be adjusted for each specific site, taking into consideration local environmental conditions, host status and dynamics, pest population dynamics, and epidemiological considerations.

The program will follow several stages including initially a phase-in, delimitation, and containment period. During this stage, the first priority for the program in both Illinois and New York will be to complete a survey to delimit the extent of the infestation in both States. Results will provide information needed to determine where tree removal and chemical treatment will be conducted in upcoming years. The suppression and control stage will integrate a combination of tree removal and chemical treatments after assessing area-specific characteristics such as host availability, pest population levels, and potential for spread. During the deregulation and eradication stages, continuous intensive survey will allow outbreak areas to be removed from quarantine and eventually declared free of ALB.

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I. Background

The Asian long-horned beetle (ALB), *Anoplophora glabripennis*, is a destructive wood boring pest of maple and other hardwoods. This exotic pest was first discovered in the United States in Brooklyn, New York in August 1996, and was detected in Chicago, Illinois in July, 1998. The beetle is native to China and as such has few natural enemies in the United States. ALB successfully attacks and kills healthy trees. In 1992, China reported over \$200 million direct loss of damage to poplar trees. Even more foreboding, Chinese pest managers use North American hosts such as sugar maple as trap trees and logs in poplar plantations to reduce beetle damage and protect their native hosts. The ecological and host range of this insect in Asia suggests that it probably can occur almost anywhere in the United States.

The potential for economic, social, and environmental effects if these wood boring pests were to become widespread in the United States is extensive. ALB attacks and causes damage to many different hardwood trees including Norway, sugar, silver, and red maple, horse chestnut, poplar, willow, elm, and black locust. It has also been reported to attack several fruit trees including apple, cherry, peach, plum and pear. Several industries would feel the impact including the timber industry, maple syrup industry, commercial fruit industry, tree nursery and greenhouse industry and the tourist industry. In addition, many of these species are popular street trees in the urban environment. According to a recent Forest Service/APHIS study, total value of tree resources at risk in the Cities of Chicago and New York is \$1.2 billion and \$2.3 billion respectively. The estimated potential national impact of ALB if every urban place in the continuous United States becomes totally infested is a loss of about 35% of the canopy cover, 30% of the trees (1.2 billion trees) and \$669 billion dollars in compensatory value. Besides the aesthetic, recreational, and production value of trees and wooded areas, other benefits are multifold and include cleaning the air of pollutants, microclimate effects, diminution of storm water runoff, reduction in street noise, and enhancement of local wildlife populations.

Since 1996, APHIS, State and city cooperators in New York and Illinois, and US Forest Service have undertaken eradication activities imposing quarantines, conducting surveys around confirmed sites, and removing infested trees. To date, over 5,000 trees have been removed in New York and 1,400 trees in Chicago. APHIS and Forest Service have worked with State and City agencies to replace trees that had to be removed because of ALB. Even with these efforts, the pest continues to spread in these metropolitan areas. Lack of effective survey and control technology other than tree removal has limited progress. However, better survey techniques and a chemical treatment are now available. This document proposes an aggressive joint Federal, State and local initiative to eliminate the pest from the United States and protect vulnerable urban, forest, and agricultural resources at risk.

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II. Primary Objective

The primary objective is to protect the forest products industry, the biological diversity of our hardwood forests and park lands, and the quality of the urban environment from the destructive effects of ALB through its containment and eradication.

III. Implementation guidelines and tactics

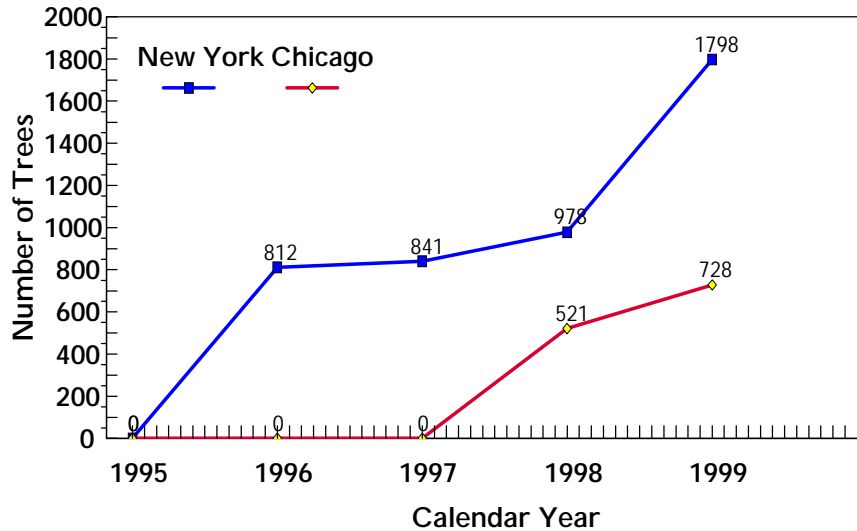
Implementation of the program will follow emergency response guidelines developed in year 2000 by scientists and program managers with experience in pest management and ALB. These guidelines specify the protocols for survey, control, and regulatory activities for areas infested with the ALB. The guidelines will be adjusted for each specific site, taking into consideration local environmental conditions, host status and dynamics, pest population dynamics, and epidemiological considerations. Four levels of surveys will be conducted extending out 25 miles from known infested areas and involve the visual inspection of host trees by an inspector for indications of beetle presence. The intensity and frequency of inspection in each survey level will be set according to risk based protocols.

The priority for the program in 2001 for both Illinois and New York is to complete surveys to delimit the extent of the infestation in both States using the most effective methodology including tree climbers and the use of bucket trucks. The new survey guidelines were developed from recent adult dispersal data from research work conducted in China and spatial analysis of domestic ALB detections in Illinois. Based on this current knowledge of the dispersal of ALB, more extensive and intensive survey of areas surrounding the currently infested areas is required. Information from the survey will be used to determine the boundaries of regulated areas and the size and location of control zones.

The principal control tactic to this point has been the removal of trees discovered with signs of beetle presence such as exit holes, oviposition sites, or the beetle itself. In 1999, a new chemical treatment was developed by APHIS scientists in China, tested in Illinois and New York, and used operationally in the Spring of 2000 in selected areas of Chicago. The recently developed emergency response guidelines incorporate this treatment and call for a more aggressive control program by removing or chemically treating host trees within a minimum of 1/8 mile of an infested tree. ARS research results on dispersal and flight ability and APHIS methods development analysis of detection data in Chicago indicate that conducting control activities within 1/8 of a mile of an infested tree will encompass greater than 90% of the area in which adult beetles are likely to disperse. A combination of tree removal and chemical treatments will be used after assessing area-specific characteristics such as host availability, pest population levels, and potential for spread. Chemical treatments will be applied to provide protection for trees over a three year period.

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Number of Infested Trees Detected



Regulatory activity will prevent the artificial spread of the pest to new areas. The scope of regulatory activity will be commensurate with risk as determined in the guidelines. Regulated boundaries can be removed from an area when two successive annual core (Level 1) and delimiting surveys (Level 2) have been completed throughout the regulated area and are negative for active signs or the presence of ALB. Eradication from an area can be declared when four successive annual core and delimiting surveys have been completed and are negative for active signs or the presence of ALB.

In addition to the above measures, US Forest Service will provide for replanting of nonhost trees in areas where infested trees were removed. Ongoing public awareness campaigns will encourage the public to actively look for the beetle and maintain a high level of support for program activities. Data management and geographic information systems, data analysis, and quality assurance components will be used to monitor program effectiveness and progress towards eradication.

IV. Eradication Action Plan

Implementation of the action plans for Illinois and New York requires a coordinated effort from local, State, and Federal program leaders. The plans incorporate the components and tactics outlined above and are sufficiently flexible to accommodate most adjustments or modifications if

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the scope of the program changes or alternative methodologies or technologies become available.

Several distinct outbreak areas can be identified in both Illinois and New York. Illinois has one large generally infested area named Ravenswood, and several smaller satellite outbreaks: Addison, Kilburn Park, Park Ridge, and Summit.

New York has two generally infested areas: Brooklyn/Queens in New York City and Central Long Island. Satellite outbreaks in New York City are Bayside, Flushing, Flushing Meadows, Lower East Side Manhattan, and Rupert Playground. The only satellite outbreak on Long Island is Islip.

IV.1 General Strategy for Outbreaks

Years 1 and 2: 2001 - 2002 Phase-In, Delimitation, and Containment

The acquisition of resources necessary to carry out the plan is a large task and the current infrastructure will not support instantaneous scaling up. The implementation of the plan will involve new office space in New York City and Chicago, increasing staff by 200%, and adding administrative support. In addition, a large percentage of our survey program will be conducted through the utilization of the tree care industries by contracting for inspections through tree climbing, bucket truck operation, and control applications. Time is needed to develop and implement these contracts. A year phase-in period is thus expected before full program activity implementation will be achieved.

The general strategy begins with an immediate intensive survey of all host trees within 1½ miles (survey levels 1 and 2) of the location where an infested tree had been discovered. This survey will be completed during the first calendar year throughout outbreak areas in Illinois and New York. Survey results will likely indicate some expansion of generally infested and satellite areas. Also, one or two small additional satellite outbreaks may be discovered. All positive trees will be removed, greatly suppressing the overall ALB population and reducing the likelihood of further spread. Results will provide information needed to determine where tree removal and chemical treatment will be conducted in upcoming years. Public awareness activities will be heightened to aid in detection activities.

In year 2001 in Illinois, chemical treatments of host trees will be targeted for the generally infested area of Ravenswood and all the satellite areas. Treatments will encompass all the currently known infested areas in the State.

In New York, emphasis will be placed on satellite outbreaks and the generally infested areas on the west edge of the infestation including Rupert Playground and Lower East Side Manhattan in

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Manhattan and the southwestern portion of the Brooklyn/Queens generally infested area. In addition, control activities will start in Islip on the eastern edge of the infestation. This approach in New York will contain the pest east of the Hudson River protecting tree rich urban areas of New York and New Jersey and prime hardwood forests further to the west. Chemical treatments will be conducted within 1/8th mile of positive tree sites. All infested trees will be removed. Removal of exposed host trees in close proximity to positive finds will occur in some situations such as in generally infested areas where the probability of infestation is high. This action will significantly suppress pest population levels, further reduce the risk of spread, and shorten the duration of the program.

In year 2002, along with survey, public awareness, and regulatory activities conducted as recommended in the emergency response guidelines, control activities will be applied in all areas. All Illinois outbreak areas will undergo chemical treatment and/or tree removal. This is the third year of chemical treatments within the satellite infestations and the second year of treatments for the Ravenswood generally infested area.

In New York, chemical treatments will begin in Central Long Island, Bayside, Brooklyn/Queens, Flushing, and Flushing Meadows. Year 2 of chemical treatments will occur in Lower East Side Manhattan, Rupert Playground, the southwestern portion of Brooklyn/Queens, and Islip.

Years 3 through 5: 2003 - 2005 Suppression and Control

Survey, public awareness and regulatory activities are ongoing during this period in all areas. Control activities including chemical treatments will have begun in all areas. Areas will receive three annual treatments. No further treatment will be necessary if no active signs of beetle presence are discovered in the third year of treatment. Otherwise, chemical treatments will continue annually until no indications of pest infestation are found. In Illinois, we expect three years of treatment in the Addison, Kilburn Park, Park Ridge, and Summit outbreak areas and four years in the generally-infested area of Ravenswood. This estimate builds in the possibility of the detection of another satellite in the Ravenswood area. This means that we expect to find the last active indication of beetle infestation in 2003.

In New York, we expect three years of treatment in Bayside, Flushing, Flushing Meadows, Islip, Lower East Side Manhattan, and Rupert Playground; and four years of treatment in the generally infested areas of Central Long Island, and Brooklyn/Queens. The last active sign of ALB in New York should occur in 2004. Projections are based primarily on the size, location, and age of the infestation and may be accelerated with additional host tree removal and treatment.

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Years 2 through 6: 2002 - 2006 Deregulation

Survey activities will continue in all areas. After two years of survey with no indication of beetle presence, an outbreak area is eligible to be removed from regulations. Any population that might be present at this time would pose a minimal risk of artificial spread. In Illinois this is expected to occur after the 2002 negative survey is completed in Addison, Kilburn Park, Park Ridge, and Summit. By the end of calendar year 2000, these areas will have completed the first year of surveys and control activities according to guidelines. The Ravenswood area may be deregulated in 2005.

In New York, Islip and Rupert Playground could be removed from regulations by 2003. Lower East Side Manhattan could be removed by 2004. Bayside, Flushing, and Flushing Meadows may be removed in 2005; and the Central Long Island and Brooklyn/Queens areas in 2006.

Years 5 through 9: 2005 - 2009 Eradication

Because of the difficulty in finding very light infestations with current survey methodology, we plan to conduct surveys according to the emergency response guidelines for four years after the last sign of active ALB presence in an area was recorded. After four years of negative results in an outbreak area, ALB will be declared eradicated from the area. Complete eradication of ALB from Illinois is expected in 2008; and in New York in 2009.

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Calendar Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Program Year for Plan		1	2	3	4	5	6	7	8	9
ILLINOIS										
Addison	SRC	SRC	SRC	S	S	E				
Park Ridge	SRC	SRC	SRC	S	S	E				
Kilburn Park	SRC	SRC	SRC	S	S	E				
Summit	SRC	SRC	SRC	S	S	E				
Ravenswood	SR	SRC	SRC	SRC	SRC	SR	S	S	E	
NEW YORK										
Islip	SR	SRC	SRC	SRC	S	S	E			
Rupert Playground	SR	SRC	SRC	SRC	S	S	E			
Lower East Manhattan	SR	SRC	SRC	SRC	SR	S	S	E		
Bayside	R	SR	SRC	SRC	SRC	SR	S	S	E	
Flushing	R	SR	SRC	SRC	SRC	SR	S	S	E	
Flushing Meadows	R	SR	SRC	SRC	SRC	SR	S	S	E	
Central Long Island	R	SR	SRC	SRC	SRC	SRC	SR	S	S	E
Brooklyn/Queens	R	SR	SRC	SRC	SRC	SRC	SR	S	S	E
<p> S = Survey R = Regulatory C = Control E = Eradication Declared </p> <p> = Year Last Beetle Found Red = Regulation Yellow = Deregulation Green = Survey Only </p>										

IV.2 Prevention and Early Detection

The USDA's Animal and Plant Health Inspection Service (APHIS) pest risk analysis indicates that ALB hitchhiked to the United States in solid wood packing materials (SWPM), such as crates and pallets, from China. In the last 15 years, trade with China has increased tremendously to \$62 billion a year, which is up from \$5 billion in 1985. As a result, the volume of pallets and crates passing through ports of entry has grown exponentially. In an effort to prevent additional infestations of ALB, USDA APHIS published an interim rule on September 18, 1998, requiring that all solid wood packing material from China, including Hong Kong, be treated with preservatives, heat treated, or fumigated prior to arrival in the United States. APHIS has also begun work on a more global strategy to deal with the risks presented by SWPM from all parts of the world. Several of our trading partners, including China, have taken steps to mitigate the risk these packing materials pose as well.

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At the national level, APHIS is taking several additional steps to protect against the beetle, including issuing pest alerts to U.S. port-of-entry personnel, conducting outreach to local importers, targeting high risk importers and Chinese exporters for outreach, and increased inspections of SWPM at ports of entry.

Early detection is essential to successful and efficient eradication of an exotic pest. Discovering the pest when the infestation is small in size allows managers more flexibility in tactics and control methodologies and provides a greater chance of success for eradication. Upon discovery, immediate and aggressive actions to eliminate the pest results in shorter and less expensive eradication programs. In 2000, APHIS implemented a national survey for ALB at high risk importing establishments through out the United States to determine if there are any other incipient infestations of ALB or other exotic wood borers. The survey is still in progress and, to date, no additional ALB infestations have been found. However, other exotic wood borers have been detected in several warehouse locations associated with SWPM, but have not been found established in the environment. APHIS intends to maintain this survey until the SWPM pathway is closed through regulatory and outreach actions.

V. Scientific Support

Scientific support has played a significant role in the development of the program and is expected to contribute additional technical advancements and program efficiencies throughout the life of the program. Major accomplishments thus far include: 1) quality assurance studies that led to the use of bucket trucks and tree climbers - a much more effective survey methodology; 2) studies and data analysis that estimate the natural dispersal rate and host selection of ALB - the basis of the survey, regulatory, and control guidelines; and 3) development of a trunk injection chemical treatment to augment tree removal - an environmentally friendly control strategy that allows the program to be proactive and accelerate eradication. Ongoing research and methods development is expected to provide in the near future additional improvements and enhancements to program components such as: 1) acoustical devices for detection; 2) a uniform data management system incorporating dataloggers and GPS (global positioning systems) to aid in program decision making and operations as well as research on dispersal, infestation dynamics, and host relations; 3) a soil injection chemical treatment to augment tree injection which is expected to be more cost effective and less damaging to trees; 4) the ability to produce large numbers of beetles in a rearing facility to provide sufficient beetles for research studies and tests, and, in the long term, alternatives to chemical treatments using sterilized beetles to disrupt mating or as vectors for disease or biocontrol agents; and 6) effective exclusion technologies to detect and eliminate the pest from foreign cargo entering the United States.

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VI. Role of Cooperators

The present plan has been produced in collaboration and consultation with State and local cooperators and the US Forest Service. The USDA APHIS and State and local cooperators will take the lead in managing the survey, regulatory, control, data management and public awareness operations in the outbreak areas. The specific roles of cooperators will vary between Illinois and New York. Program managers will determine roles and responsibilities in each State as dictated by legal authorities, expertise, administrative and technical strengths, and available staff, resources, and equipment. The USDA APHIS will also conduct a national survey targeted at areas in proximity to distribution centers, warehouses, manufacturers, and other entities that receive shipments of materials from China. Also, the USDA APHIS will accomplish a national public awareness campaign to augment ongoing ALB exclusion efforts at the ports of entry.

The USDA Forest Service will help the affected communities and neighborhoods recover from the loss of their trees. This recovery assistance includes seed money for replacement of trees, and direct technical assistance and information programs directed towards the selection, care and maintenance of trees. The Forest Health Technology Enterprise Team will continue to collaborate with the APHIS Otis Methods Center and other agencies on: developing chemical insecticides for control of adult and immature ALB; developing traps/trapping strategies for adult ALB; and, other high priority technology to support the detection and eradication goals of the ALB program. The Forest Health Protection staff will continue its efforts to assist APHIS PPQ and local officials in the detection and eradication of the existing ALB infestations in New York and Illinois; and conduct activities to enhance the likelihood of detecting currently unfound ALB infestations outside of NY and Illinois through targeted surveys and information directed at the tree care and related professions.

VII. Public Awareness and Outreach

The ALB cooperative eradication project will continue to rely heavily on a public outreach program as an important part of the fight against this tree killing pest. Since the beetle is hard to detect and there are presently no effective lures/traps for this insect, the more people trained to spot signs of the beetle and report these signs, the better our eradication effort will be.

Each year print advertisements run in Chicago and New York during prime beetle flight season: July-September. An advertisement was printed weekly and Sundays in all major newspapers during this time period. The ad urges people to be aware of the beetle and to call local hotlines or office numbers to report a suspect beetle or feeding damage caused by the beetle. Calls to state hotlines tripled during this time and the project office had to hire a temporary employee to help answer the phones due to the increased call volume. Through public reporting, several infested trees and even satellite outbreaks have been discovered. Work with local professionals

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throughout the program area, including but not limited to arborists, landscapers, nursery managers, foresters, garden clubs, and extension specialists, is also a continuing effort as part of our educational outreach program. Outreach is accomplished through the printing and continued distribution of ALB educational materials, and by attending local events or making presentations to the varied professionals in this field of work. Every pair of eyes looking for these beetles is one more weapon in an eradication effort. The risk to our trees is too great not to engage every person in this fight.

VIII. Budget and Equipment

The primary components of the program are survey, regulatory and control activities. An annual survey is required throughout the program; first to detect and determine where regulatory and control program activities are needed, second to monitor the effectiveness of these activities and make program adjustments accordingly, and third to verify that eradication is complete and successful. With current available technology and methodology, the survey component is also the most expensive, about 48%. This is partly due to the need to contract tree care companies to provide bucket trucks and tree climbers on an ongoing basis. USFS smokejumpers will be utilized when available to augment the contractor tree climbing services.

The cost of the control program is about 17% of the total program. The major portion of this cost will be spent on contracting for chemical treatments. The method of application, injection of each host tree trunk, is very personnel resource intensive. During the application, capsules filled with pesticide are placed into the tree base and require about four hours to drain their contents into the tree. During this time, we require the contractor to monitor the trees as a safety precaution especially for children and pets. However, compared to aerial applications or cover sprays, this method is environmentally friendly and accepted by the public. Tree removal will also play a major role in the first few years until pest populations are suppressed.

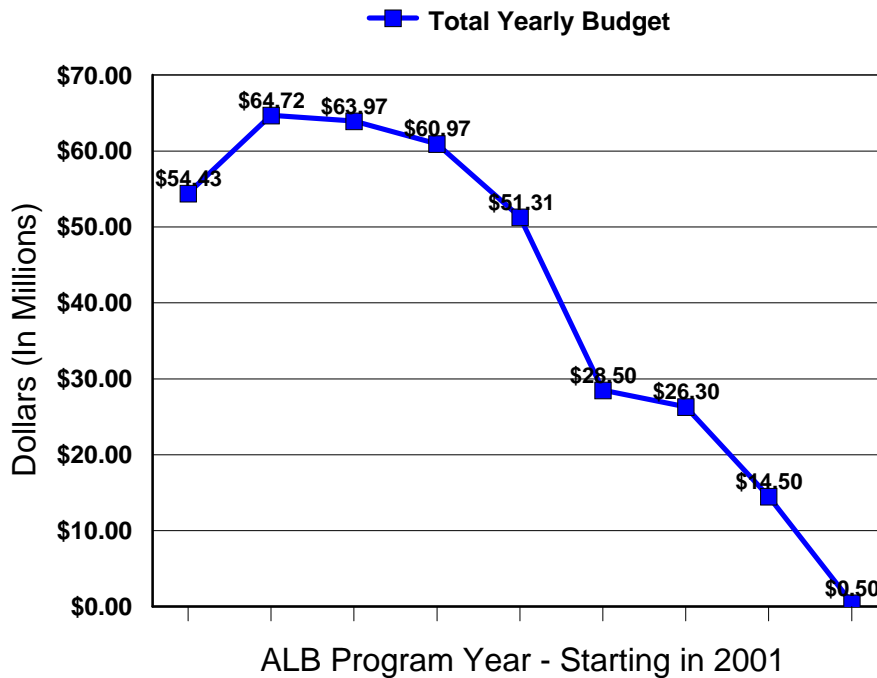
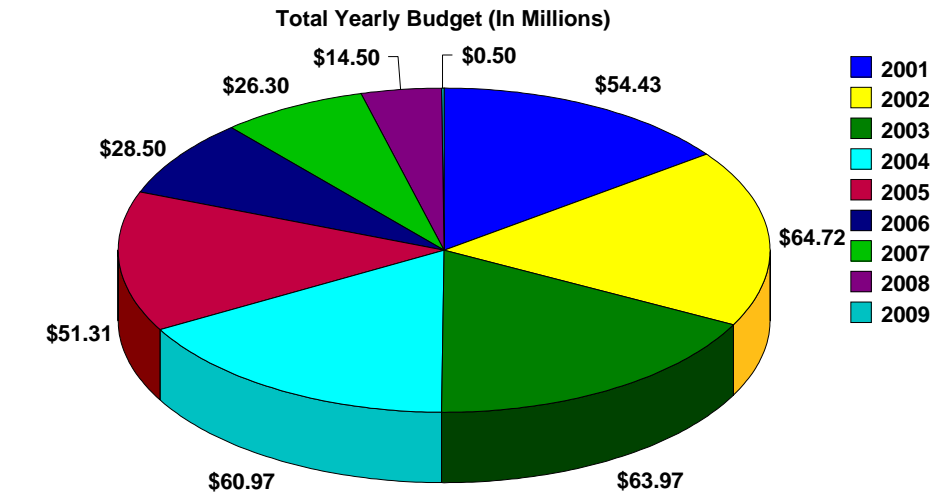
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Illinois and New York Eradication Program Budget (In Millions)

Calendar Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	TOTALS
Program Year for Plan	1	2	3	4	5	6	7	8	9		
ILLINOIS											
Administration		1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.20		7.20
Survey		9.86	9.86	9.86	9.86	6.00	6.00	6.00			57.44
Regulatory		0.46	0.46	0.46	0.46	0.46					2.30
Control		5.00	5.20	4.60	4.60						19.40
Subtotal		16.32	16.52	15.92	15.92	7.46	7.00	7.00	0.20		\$86.34
NEW YORK											
Administrative		1.54	1.60	1.60	1.60	1.60	1.60	1.60	1.00	0.20	12.34
Survey		24.58	25.00	25.00	25.00	25.00	16.90	16.90	12.70		171.08
Regulatory		2.00	2.00	2.00	2.00	2.00	2.00				12.00
Control		5.27	14.10	14.10	13.00	12.60					59.07
Subtotal		33.38	42.70	42.70	41.60	41.20	20.50	18.50	13.70	0.20	\$254.48
NATIONAL SURVEY		1.00	1.00	1.00							3.00
METHODS		1.30	1.50	1.50	1.00	1.00	0.50	0.50	0.30	0.10	7.70
LPA		0.83	0.80	0.80	0.80	0.50	0.20	0.20	0.20	0.10	4.43
IS		0.25	0.25	0.25	0.25	0.25					1.25
TOTAL PPQ (millions)		53.08	62.77	62.17	59.57	50.41	28.20	26.20	14.40	0.40	\$357.20
USFS REPLANTING/ Recovery/Scientific Support		1.35	1.95	1.80	1.40	0.90	0.30	0.10	0.10	0.10	8.00
GRAND TOTAL		\$54.43	\$64.72	\$63.97	\$60.97	\$51.31	\$28.50	\$26.30	\$14.50	\$0.50	\$365.20

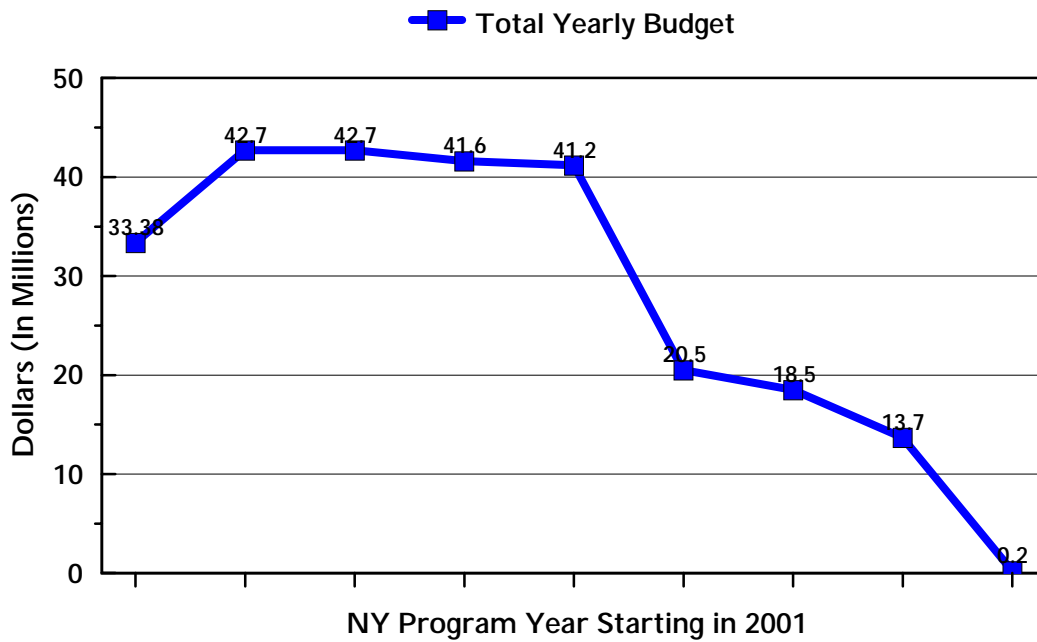
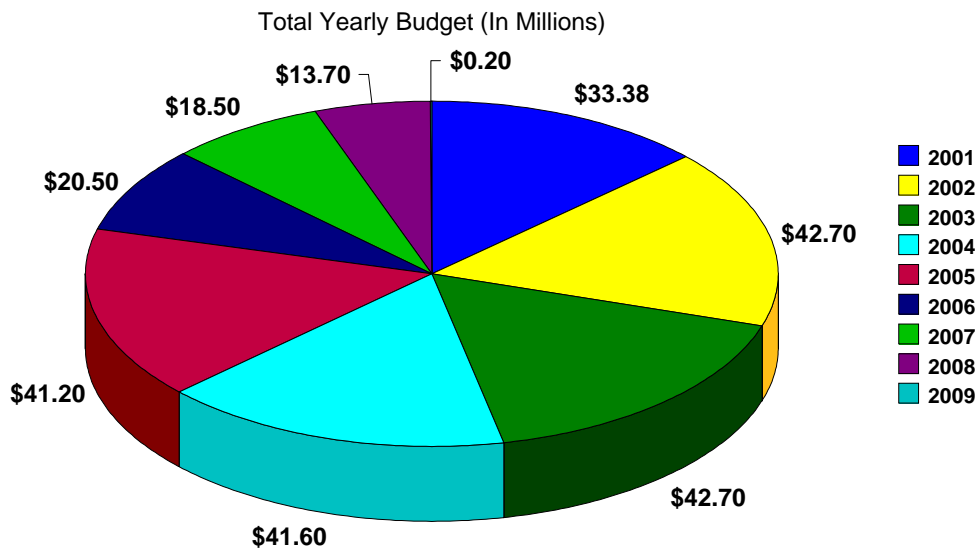
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ALB Eradication Budget Years 2001 - 2009 \$365.20 Million Dollars



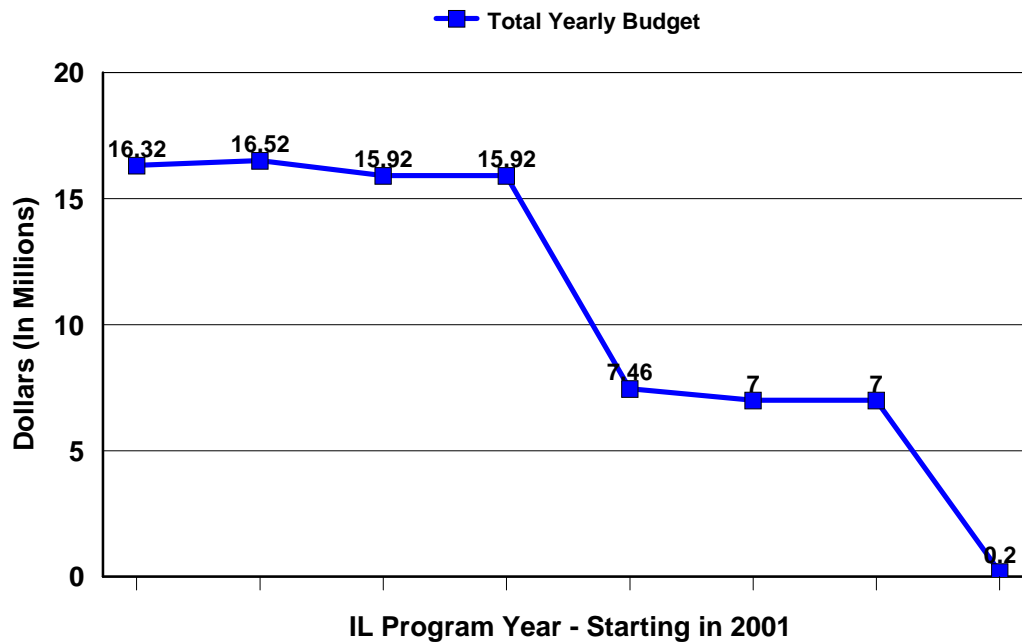
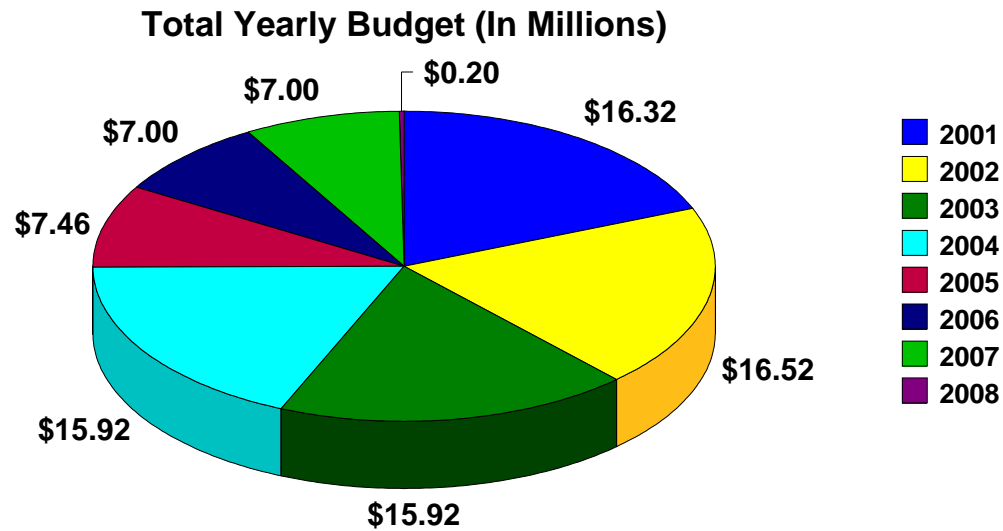
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New York ALB Eradication Budget 2001 - 2009 \$254.48 Million Dollars



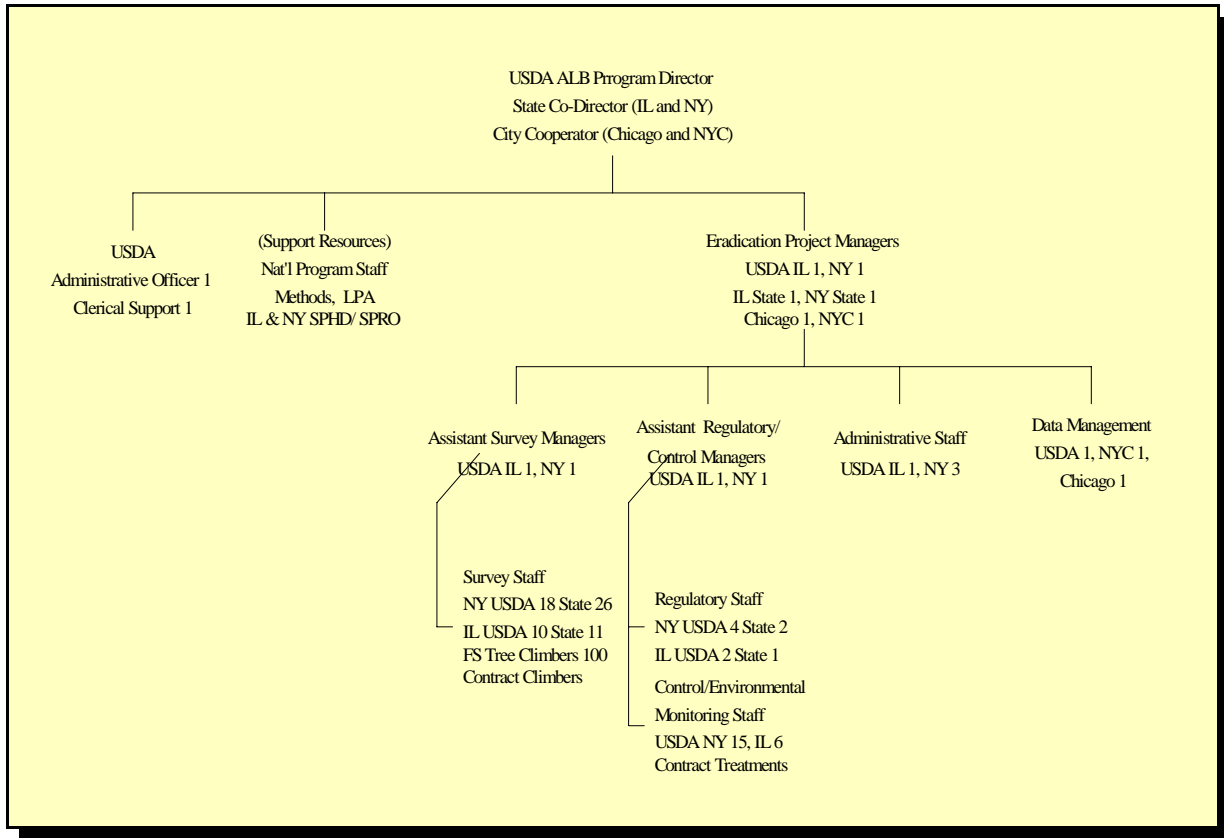
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Illinois ALB Eradication Budget Years 2001 - 2008
\$86.34 Million Dollars



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IX. Staffing



In order to achieve the goals of this strategic plan, increased staffing and resources will be required. This organizational chart exhibits the staffing required to deliver this program beginning in Year 2001.

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Contact Information:

This document was prepared by Mike Stefan, USDA, APHIS, PPQ, Invasive Species and Pest Management staff, 4700 River Road, Riverdale, MD. 20738 (301 734 8247); and Christine Markham, ALB Program Director, USDA, APHIS, PPQ, Eastern Region, 920 Main Campus Dr. Ste 200, Raleigh, NC 27606-5202. (919 716 5576).


September 25, 2000



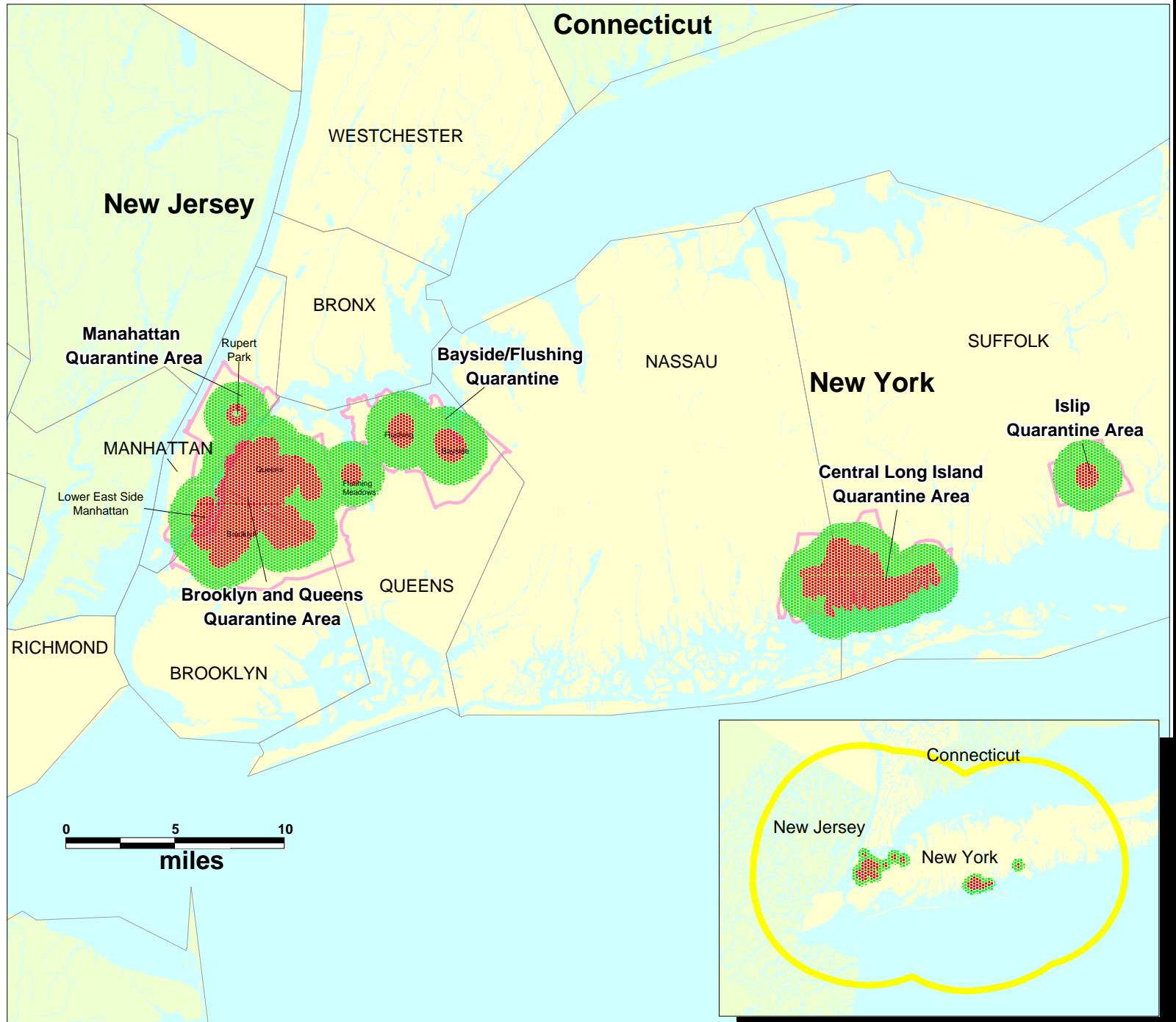
**ANIMAL AND PLANT
HEALTH INSPECTION
SERVICE**

**Cooperative New York State
Asian Longhorned Beetle
Eradication Program**

LEGEND

-  Quarantine Boundary
-  Level One Survey
-  Level Two Survey
-  Level Four Survey
-  Parks

The Asian Longhorned Beetle was first discovered in Brooklyn in August, 1996. A second infestation was found at Amityville in September, 1996. In February, 1999, the beetle was found in Bayside. In July and August, 1999, the beetle was found in Flushing and Rupert Park respectively. In June and July, 2000, small infestations were discovered in Lower East Side Manhattan and Flushing Meadows. Level One survey extends out .5 miles from a positive tree; Level Two extends out a mile beyond Level One; and Level Four is a biometric survey within a twenty-five mile radius of a positive tree location.





City of New York
Parks & Recreation
Rudolph W. Giuliani, Mayor
Henry J. Stern, Commissioner

Asian Longhorned Beetle

New York City Infestation

LEGEND

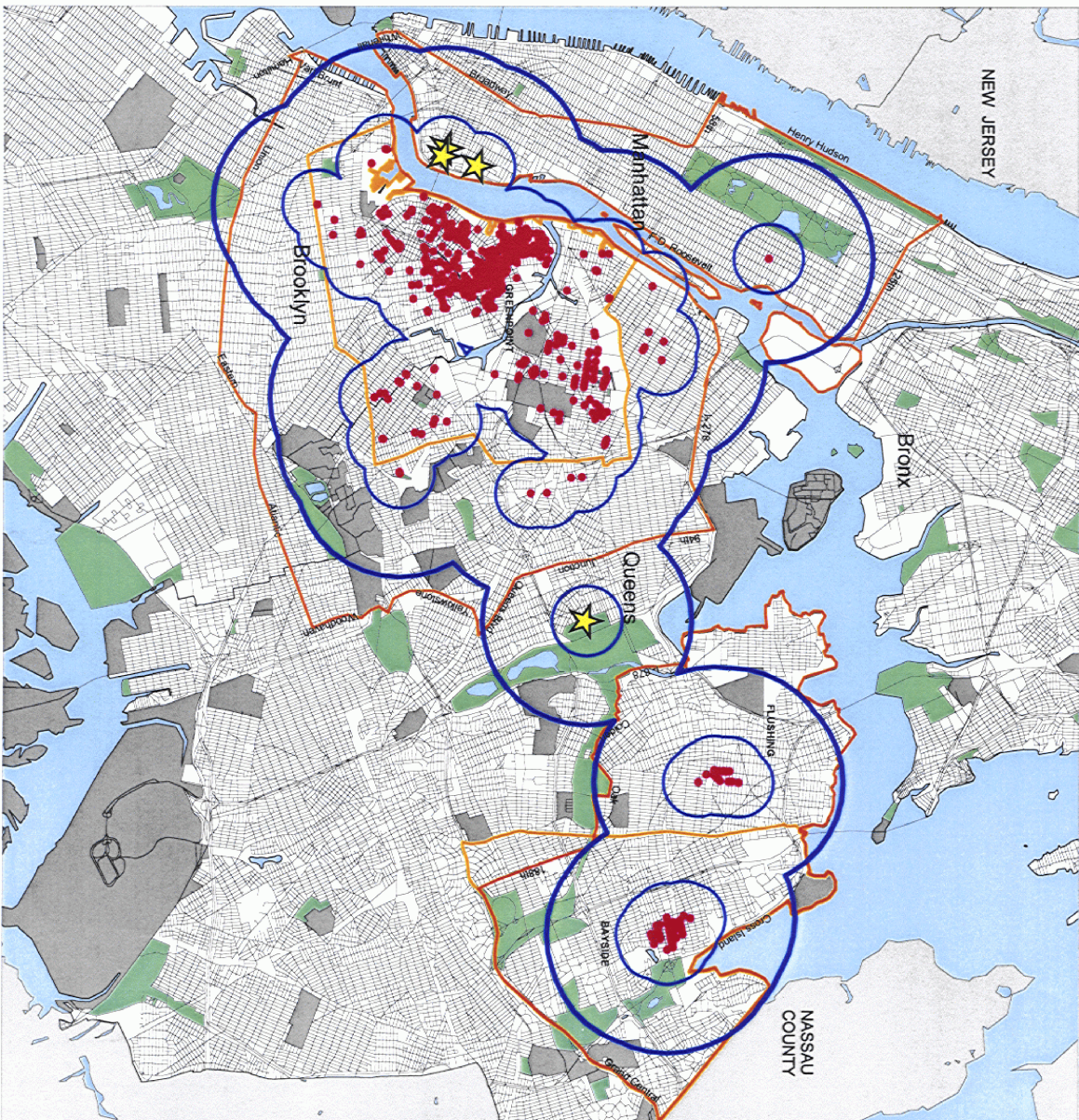
- ☆ New Infestation
- Infested Site
- Education Survey
(0.5 miles from infested sites)
- Delimitation Survey
(1.5 miles from infested sites)
- Quarantine Zone 1999
- Revised Quarantine Zone 2000
- Open Space
- Parks

The Asian Longhorned Beetle was first discovered in Greenpoint, Brooklyn in August 1996. A second infestation was found in Bayside, Queens in February 1999. In July 1999, the beetle was discovered in Flushing, Queens. The fourth infestation was found in Ruppert Playground in Manhattan in August 1999. On June 21, 2000, 19 trees were found infested in Luther Gulick Playground in the Lower East Side of Manhattan by Parks and State inspectors. On July 26, 2000 another infestation was discovered in Flushing Meadows Corona Park. To date, over 2,700 infested trees have been removed from public and private property.

0.9 0 0.9 Miles



Map prepared by Trillium and Ironwood
Central Forestry
August 2, 2000






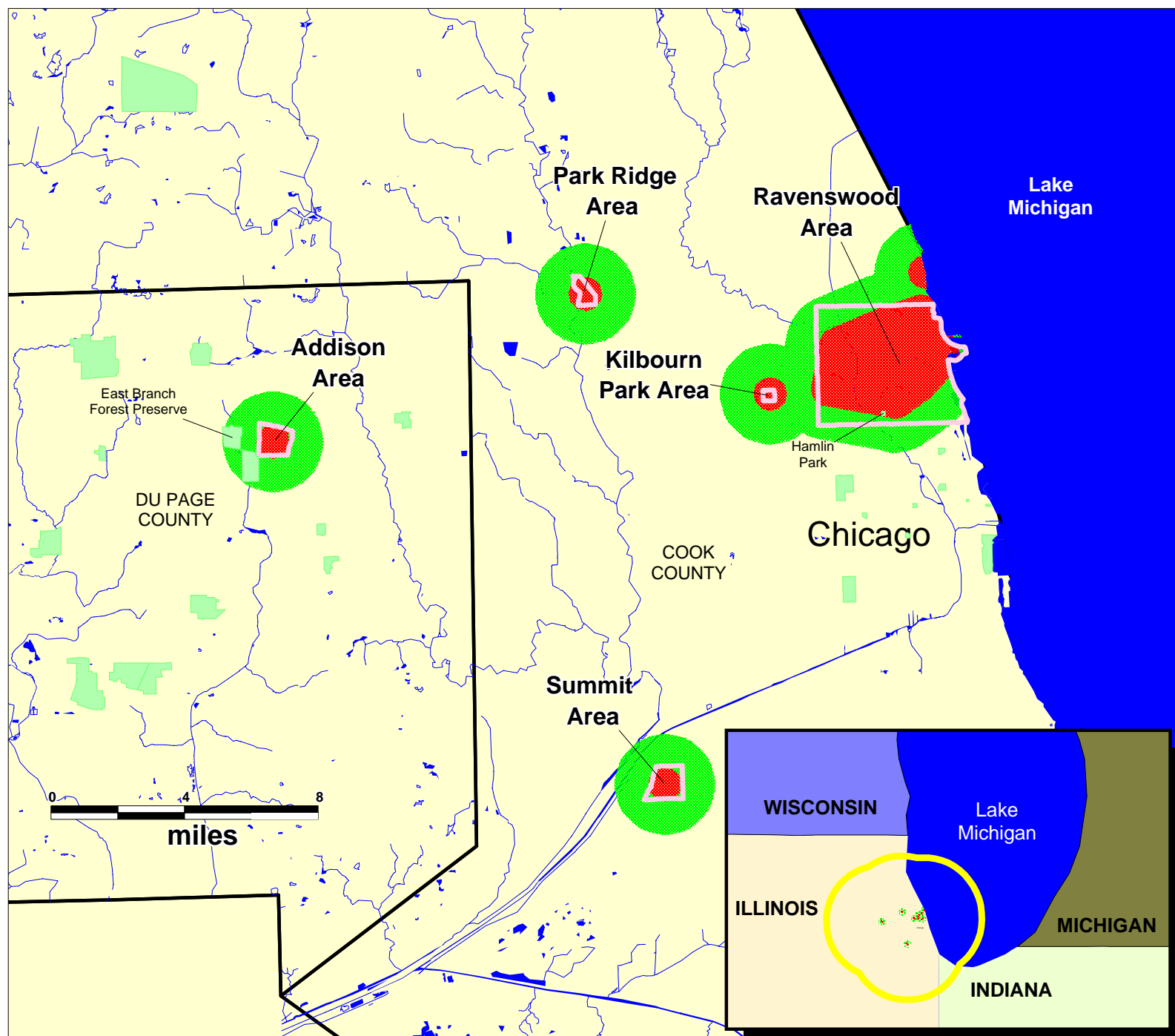
**ANIMAL AND PLANT
HEALTH INSPECTION
SERVICE**

**Cooperative Illinois State
Asian Longhorned Beetle
Eradication Program**

LEGEND

-  Quarantine Boundary
-  Level One Survey
-  Level Two Survey
-  Level Four Survey
-  Parks

The Asian Longhorned Beetle was first discovered in Ravenswood in July, 1998, with a subsequent infestation also found in Addison. In August, 1998, the beetle was found in Summit. In September, 1999, the beetle was found in Park Ridge. Level One survey extends out .5 miles from a positive tree; Level Two extends out a mile beyond Level One; and Level Four is a biometric survey within a twenty-five mile radius of a positive tree location.



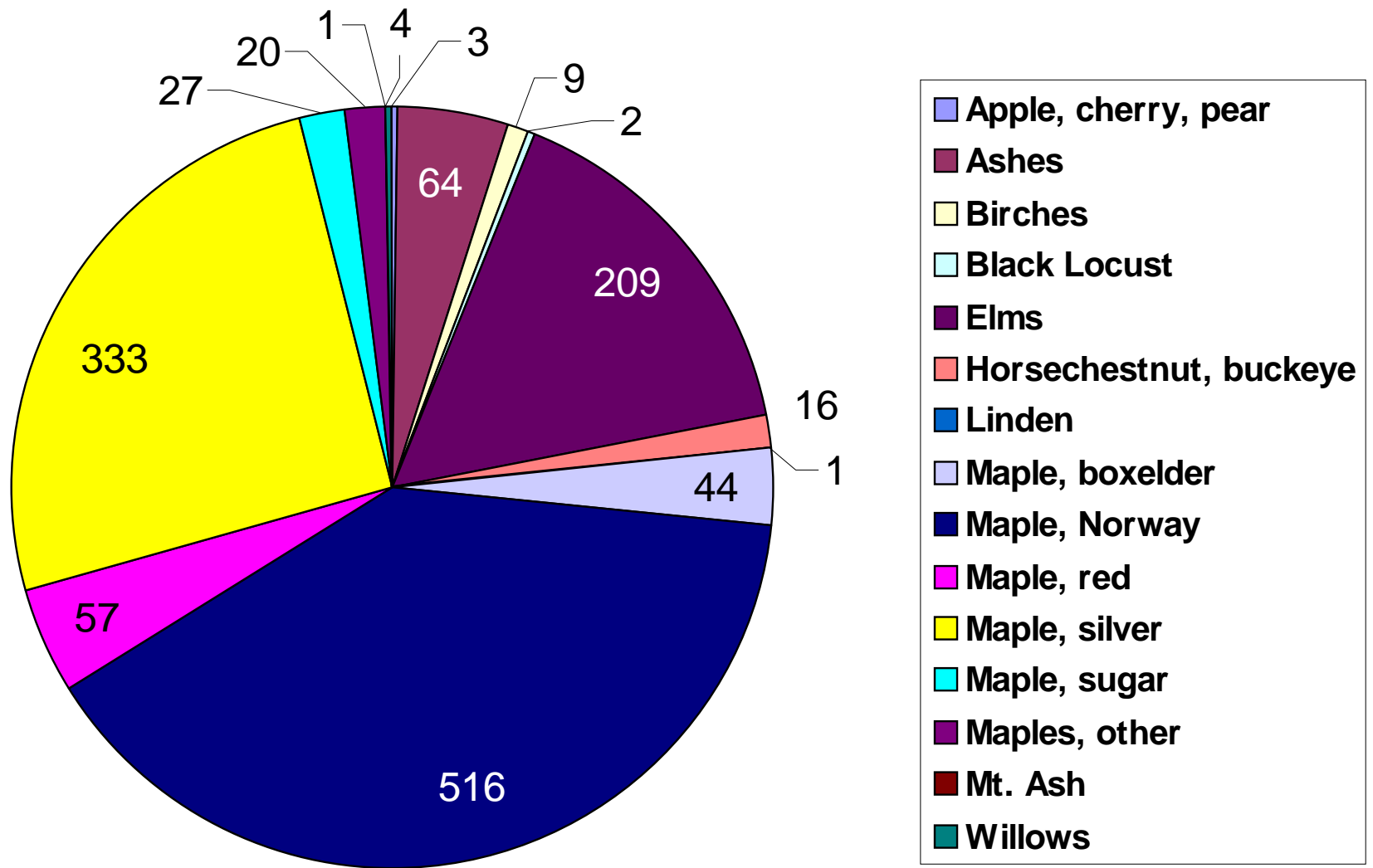
Asian Longhorned Beetle Program

USDA-APHIS
Illinois Dept. Agric.
Chicago Dept. Sts. & San.
Cooperating

Illinois Infestations 1998-2000



Infested trees, Chicago



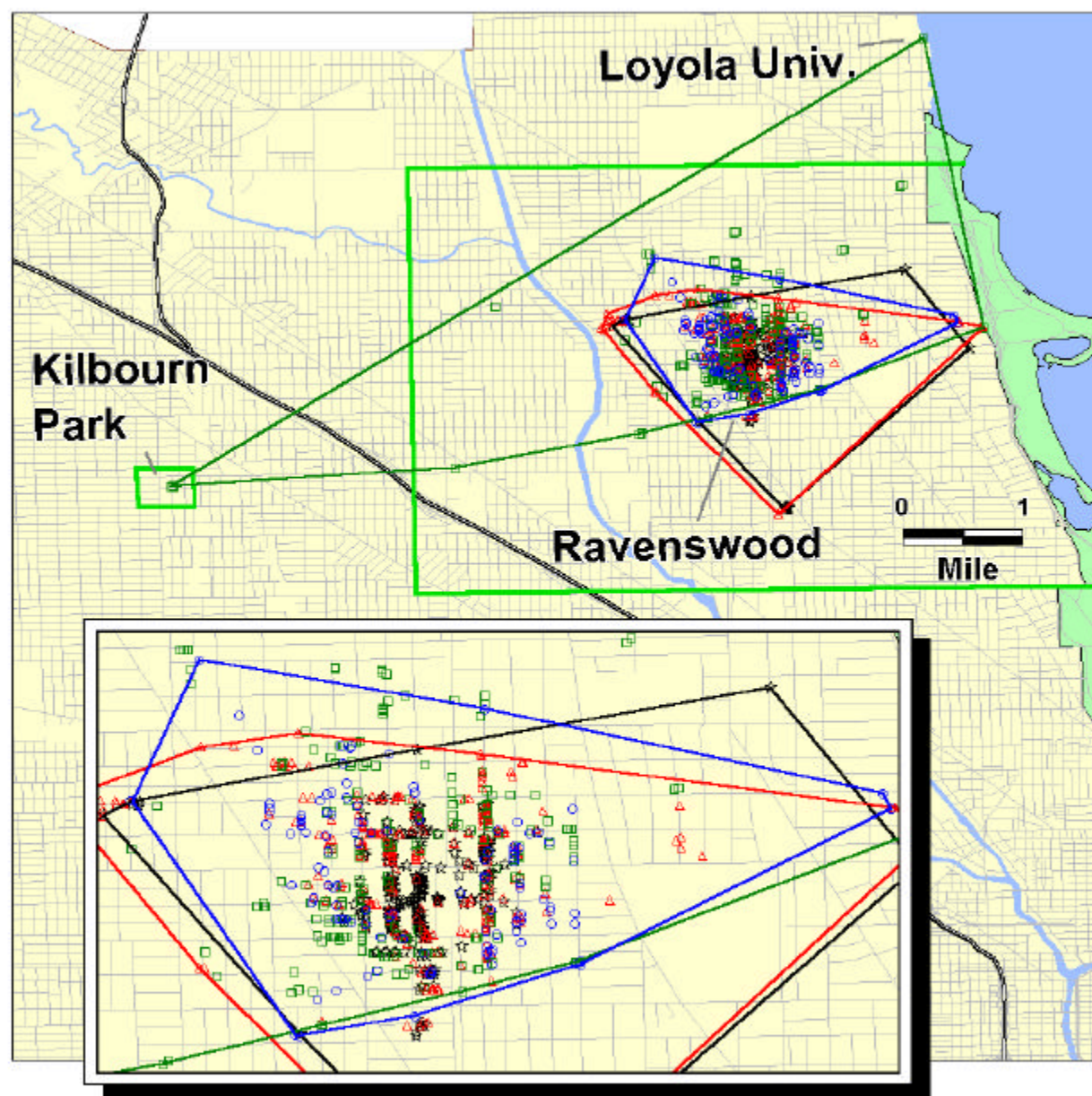
Asian Longhorned Beetle Program

USDA-APHIS
Illinois Dept. Agric.
Chicago Dept. Sts. & San.
Cooperating

Chicago Tree Removals 1998-2000

LEGEND

- ☆ Removed Jul. - Dec. 1998
- (enclosing polygon)
- △ Removed Jan. - Jun. 1999
- Removed Jul. - Dec. 1999
- Removed Jan. - Jun. 2000
- Removed Jul. - Dec. 2000
- Quarantined areas June 2000







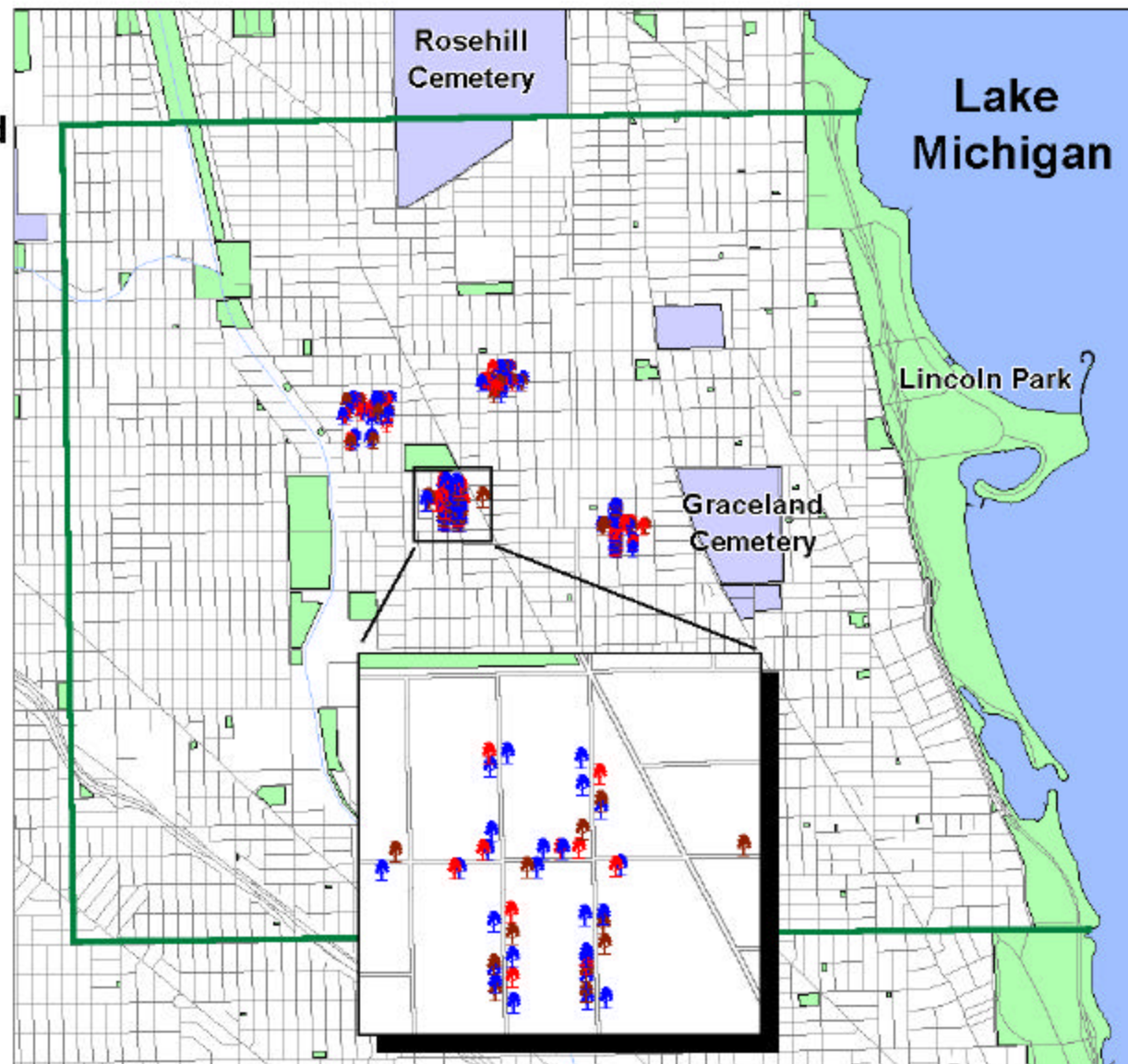
Asian Longhorned Beetle Research

USDA-APHIS
Otis Plant
Protection Center

Imidacloprid trials
Chicago, 2000

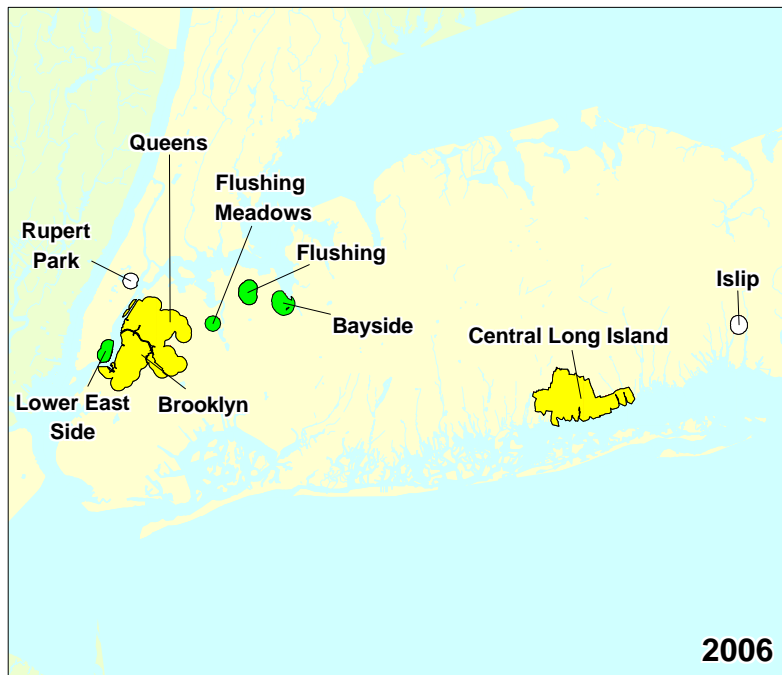
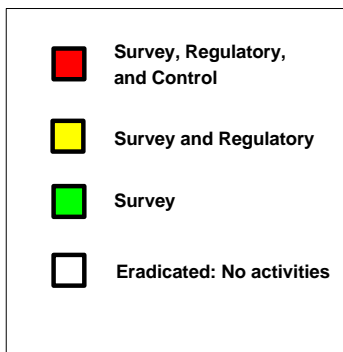
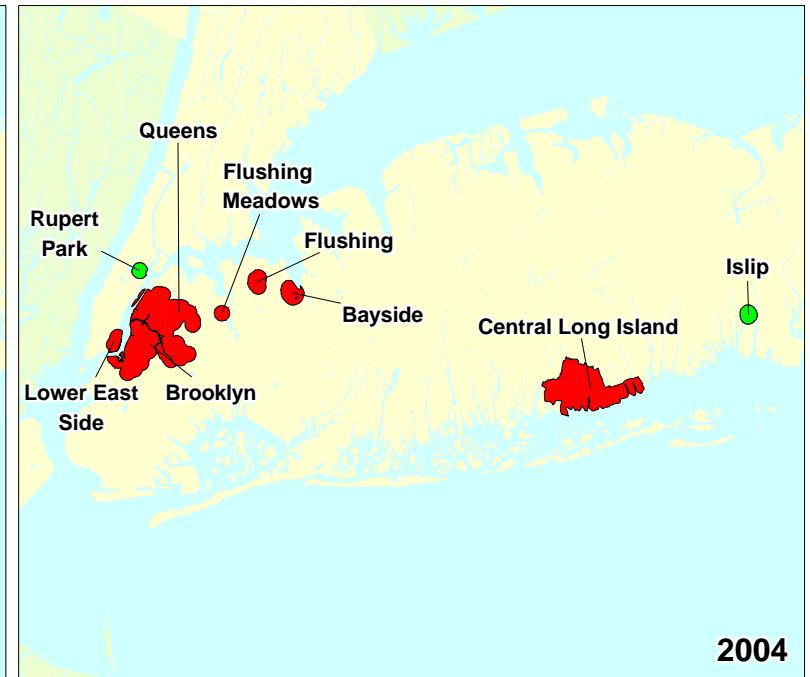
Legend

-  Control trees (120)
-  Mauget trunk injection (60)
-  Soil injection (60)
-  Quarantine boundary





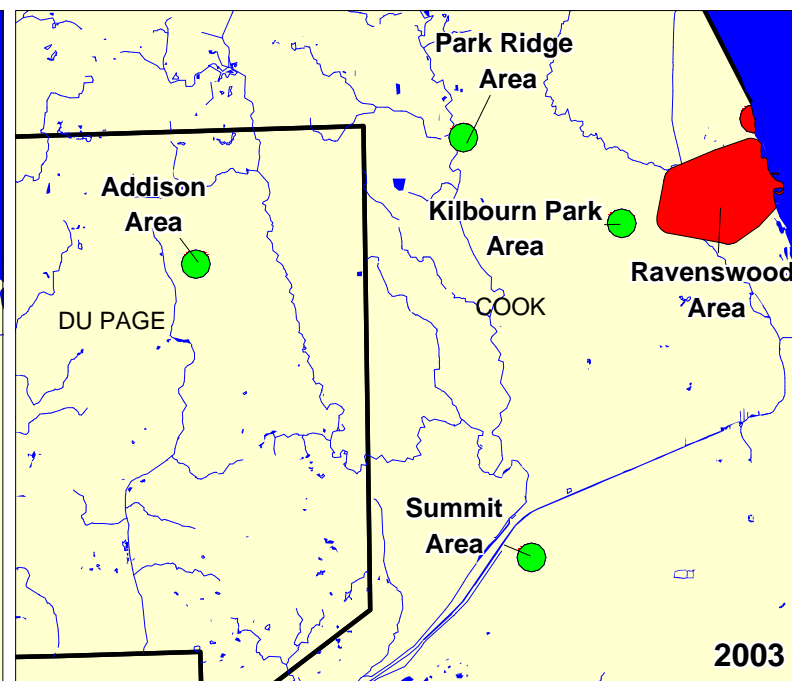
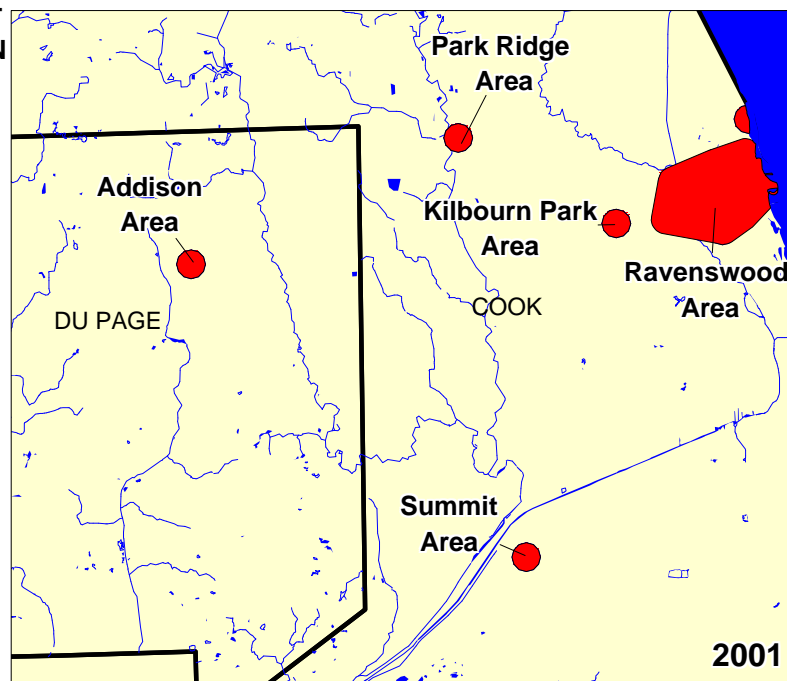
**Cooperative New York State
Asian Longhorned Beetle
Eradication Program**







Projected activities in outbreak areas for selected calendar years. The last indication of beetle presence in the New York area is expected to occur during 2004.



**Cooperative Illinois State
Asian Longhorned Beetle
Eradication Program**



-  Survey, Regulatory, and Control
-  Survey and Regulatory
-  Survey
-  Eradicated: No activities

Projected activities in outbreak areas for selected calendar years. The last indication of beetle presence in the Chicago area is expected to occur during 2003.

